

What is claimed is:

1. A lamp driving apparatus of a liquid crystal display, comprising:
a plurality of lamps; and
an inverter block having a plurality of inverters that supply a drive current to the lamps
wherein adjacent lamps have a different phase from one another.
2. The lamp driving apparatus of the liquid crystal display according to claim 1,
further comprising a current detector that detects the lamp drive current supplied to each of the
plurality of lamps in the inverter.
3. The lamp driving apparatus of the liquid crystal display according to claim 2,
further comprising an integrated circuit substrate on which the inverter block and current
detector are mounted and the integrated circuit substrate is folded to a rear surface of the liquid
crystal display.
4. The lamp driving apparatus of the liquid crystal display according to claim 1,
further comprising:
a first common line commonly connected to a second electrode terminal of odd-numbered
lamps of the plurality of lamps;
a second common line commonly connected to the second electrode terminal of
even-numbered lamps of the plurality of lamps; and
a ground voltage line connecting each of the first common line and the second common line
to a ground voltage source.
5. The lamp driving apparatus of the liquid crystal display according to claim 2,
wherein the each of the inverters comprises:
a transformer that converts a voltage from a voltage source into the lamp driving current
and supplies the lamp driving current to a first electrode terminal of each of the plurality of
lamps;

a switching circuit that switches the voltage into the transformer; and
a controller controlling the switch circuit with reference to a feedback signal from the current detector.

6. The lamp driving apparatus of the liquid crystal display according to claim 5, wherein the primary winding and the secondary winding of the transformer connected to each of the odd-numbered lamps of the plurality of the lamps are wound in the same direction, and wherein the primary winding and the secondary winding of the transformer connected to each of the even-numbered lamps of the plurality of the lamps are wound in a direction of the transformers connected to the odd-number lamps.

7. The lamp driving apparatus of the liquid crystal display according to claim 5, wherein the current detector is connected to the secondary winding of the transformer.

8. The lamp driving apparatus of the liquid crystal display according to claim 5, wherein the current detector comprises:

a resistor connected between the secondary winding of the transformer and a ground voltage source;

a first diode connected between the control block and a first node between a secondary winding of the transformer and the resistor;

a variable resistor connected between the ground voltage source and a node between the first diode and the control means; and

a capacitor connected in parallel to the variable resistor.

9. The lamp driving apparatus of the liquid crystal display according to claim 8, wherein the current detector further comprises a second diode connected between the ground voltage source and the node between the first node and the first diode.

10. A lamp driving apparatus of a liquid crystal display, comprising:

a plurality of lamps including a plurality of odd-numbered lamps and a plurality of even-numbered lamps; and

an inverter block having a plurality of inverters wherein a plurality of inverters that supply a drive current to the even-numbered lamps have a first phase and the inverters that supply a drive current to the odd-numbered lamps have a phase opposite the first phase.

11. The lamp driving apparatus of the liquid crystal display according to claim 10, further comprising a current detector that detects the lamp drive current supplied to each of the plurality of lamps in the inverter.

12. The lamp driving apparatus of the liquid crystal display according to claim 11, further comprising an integrated circuit substrate on which the inverter block and current detector are mounted and the integrated circuit substrate is folded to a rear surface of the liquid crystal display.

13. The lamp driving apparatus of the liquid crystal display according to claim 10, further comprising:

a first common line commonly connected to a second electrode terminal of odd-numbered lamps of the plurality of lamps;

a second common line commonly connected to the second electrode terminal of even-numbered lamps of the plurality of lamps; and

a ground voltage line connecting each of the first common line and the second common line to a ground voltage source.

14. The lamp driving apparatus of the liquid crystal display according to claim 11, wherein the each of the inverters comprises:

a transformer that converts a voltage from a voltage source into the lamp driving current and supplies the lamp driving current to a first electrode terminal of each of the plurality of lamps;

a switching circuit that switches the voltage into the transformer; and
a controller controlling the switch circuit with reference to a feedback signal from the current detector.

15. The lamp driving apparatus of the liquid crystal display according to claim 14, wherein the primary winding and the secondary winding of the transformer connected to each of the odd-numbered lamps of the plurality of the lamps are wound in the same direction, and wherein the primary winding and the secondary winding of the transformer connected to each of the even-numbered lamps of the plurality of the lamps are wound in a direction of the transformers connected to the odd-number lamps.

16. The lamp driving apparatus of the liquid crystal display according to claim 14, wherein the current detector is connected to the secondary winding of the transformer.

17. The lamp driving apparatus of the liquid crystal display according to claim 14, wherein the current detector comprises:

a resistor connected between the secondary winding of the transformer and a ground voltage source;

a first diode connected between the control block and a first node between a secondary winding of the transformer and the resistor;

a variable resistor connected between the ground voltage source and a node between the first diode and the control means; and

a capacitor connected in parallel to the variable resistor.

18. The lamp driving apparatus of the liquid crystal display according to claim 17, wherein the current detector further comprises a second diode connected between the ground voltage source and the node between the first node and the first diode.